

ANNUAL REPORT OF THE OHIO ACADEMY OF SCIENCE 1956

Organized 1891 Incorporated 1892
Affiliated with the American Association for the Advancement of Science

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RALPH W. DEXTER

Treasurer

ELTON F. PADDOCK

Executive Secretary, Junior Division

ROBERT E. MCKAY

Director of Public Relations

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| B. Plant Sciences: G. W. BURNS | G. Chemistry: J. H. BUCKINGHAM |
| A.B. Subsection on Genetics: D. S. DEAN | H. Science Education: CLARA KENNEY |
| C. Geology: G. H. CROWL | I. Anthropology and Sociology: LEO ESTEL |
| D. Medical Sciences: J. J. JACOBY | J. Conservation: C. V. RILEY |
| E. Physics and Astronomy: J. W. McGRATH | |

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| A.B. Subsection on Genetics: MARGARET GREEN | H. Science Education: PHILLIP DYE |
| C. Geology: J. R. COASH | I. Anthropology and Sociology: C. G. SWANSON |
| D. Medical Sciences: K. P. KLASSEN | J. Conservation: E. C. MEYER |
| E. Physics and Astronomy: H. L. LOUDEN | |

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PAUL ROTHMUND, R. F. GOLDTHWAIT

Nominating

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Academy Librarian, MORTON COBURN, Chairman

A. W. LINDSEY.....Term expires 1957 C. E. HOEL.....Term expires 1959

Publications

THE SECRETARY, Chairman

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C. E. HOEL.....Term expires 1959

Trustees of Research Funds

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H. V. KNORR.....Term expires 1958
G. W. BLAYDES.....Term expires 1959

Necrology

J. T. Maddox, Chairman...Term expires 1958
PAUL ROTHMUND.....Term expires 1957
H. H. M. BOWMAN.....Term expires 1959

Resolutions

W. C. KRAATZ, Chairman..Term expires 1958
W. H. SHIDELER.....Term expires 1957
R. V. BANGHAM.....Term expires 1959

THE OHIO JOURNAL OF SCIENCE 56(4): 245, July, 1956.

Ohio Flora

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 J. A. HERRICK, Secretary
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 E. S. THOMAS
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V. STRAHLER	E. VAN CLEEF
W. E. WILSON	

Academy Representatives

1. On the Joint Administrative Board of the Ohio Journal of Science:
 A. W. Lindsey.....Term expires 1957; C. E. Hoel.....Term expires 1959
2. On the Council of the A.A.A.S.: R. W. DEXTER

The Council for 1956-1957

R. H. BOHNING	E. L. BRAUN	J. H. BUCKINGHAM
G. W. BURNS	J. R. COASH	MORTON COBURN
G. H. CROWL	H. A. CUNNINGHAM	D. S. DEAN
R. W. DEXTER	PHILLIP DYE	LEO ESTEL
R. M. GEIST	R. P. GOLDTHWAIT	M. C. GREEN
C. E. HOEL	J. J. JACOBY	L. B. KARNES
CLARA KENNEY	K. P. KLASSEN	W. C. KRAATZ
A. W. LINDSEY	H. L. LOUDEN	J. T. MADDOX
J. W. MCGRATH	R. E. MCKAY	A. G. MCQUATE
E. C. MEYER	E. F. PADDOCK	L. C. PETTIT
R. A. POPHAM	C. V. RILEY	C. E. RONNEBERG
PAUL ROTHMUND	P. J. SEYLER	W. D. STULL
C. G. SWANSON	E. G. WESTON	

REPORT OF THE SIXTY-FIFTH ANNUAL MEETING OF THE OHIO ACADEMY OF SCIENCE

The 65th annual meeting was held on the campus of Wittenberg College at Springfield on April 19, 20, and 21, 1956. Dr. William C. Beaver, general chairman, and his local committee made the arrangements for the meetings. This was the second Wittenberg meeting, the first being held in 1929. The Executive Committee met at 3:00 p.m. and the council met at 8:00 p.m. on April 21 for the transaction of business.

On Friday, April 20, ten sections and one subsection held meetings in the following fields: Zoology, Plant Sciences, Subsection on Genetics, Geology, Medical Sciences, Physics and Astronomy, Geography, Chemistry, Science Education, Anthropology and Sociology, and Conservation. At the conclusion of the sectional meetings, Dr. John R. Mayor, director of the Science Teaching Improvement Program of the A.A.A.S., spoke on "Responsibility of Scientists and Science Departments for the Science Program of Secondary Schools." The Ohio Section of the American Physical Society met in joint session with the section of Physics and Astronomy on Saturday, April 21. The eighth annual State Science Day of the Junior Division was held on April 22 with the largest number of student projects in the history of the Junior Division. Commercial exhibits were presented by three companies. A tour for the ladies in attendance was taken to visit the Crabill Art Center and the new Weaver chapel and library. A tea was then served at the president's home. The wives of faculty members in the science departments of Wittenberg College served as hostesses. On Saturday, April 21, an all-day field trip was enjoyed by four bus loads of members from the sections of Plant Sciences, Geology, and Conservation which jointly sponsored the excursion. Inter-relationships of these fields were brought out in a study of the glacial geology, vegetation, and conservation activities in the Springfield area.

The annual banquet and business meeting was held in the dining room of the Woodlawn Hall at 6:00 p.m., April 20. Dr. W. C. Beaver acted as toastmaster. Greetings from Wittenberg College were given by President C. C. Stoughton, and a response for the Academy was given by Dr. K. G. A. Busch. Dr. Paul Rothermund, president of the Academy, delivered the presidential address, entitled, "Hemin and Chlorophyll—the Two Most Important Pigments for Life on Earth."

An election of officers was held for the following: president, secretary, treasurer, director of public relations, librarian, and a member of the trustees of research funds, necrology committee, and resolutions committee, the results of which appear at the beginning of this annual report. The secretary presented a summary of our present membership and announced the following as newly elected Fellows of the Academy with their respective section letter:

A—ACKER, G. G.
 C—BATES, R. L.
 C—BRANT, R. A.
 G—BROWN, G. H.
 E—CHERRINGTON, E. H.
 H—DUDLEY, F. M.
 C—FOREMAN, FRED
 C—FOSTER, W. R.
 H—HORN BROOK, W. H.
 H—HOSKINS, A. A.

F—HUNKER, H. L.
 C—LEVINSON, A. A.
 C—LINDBERG, G. D.
 C—MARSHALL, H. E.
 B—NORSTOG, K. J.
 C—PHELPS, W. B.
 J—PRICE, W. B.
 H—READ, P. M.
 J—REDETT, R. B.

G—REINHEIMER, J. D.
 C—RICE, W. A.
 I—SCHAEFER, J. E.
 B—SHIRLING, E. B.
 J—SLIPHER, J. A.
 C—SMYTH, PAULINE
 C—SWEET, W. C.
 C—WEISS, M. P.
 G—YALMAN, R. G.

Mr. R. E. McKay, executive secretary of the Junior Division, announced the annual awards to outstanding high school teachers and the Kroger awards for outstanding work in science for each district.

Dr. W. H. Shideler presented resolutions prepared by the Resolutions Committee.

Respectfully submitted,

RALPH W. DEXTER, *Secretary*

REPORT OF THE EXECUTIVE COMMITTEE AND THE COUNCIL

The Executive Committee met on December 2, 1955, and again on April 19, 1956; the Council met on December 3, 1955, and again on April 19, 1956. The fall meetings were held at Ohio State University while the spring meetings were held at Wittenberg College in Springfield. Following is a brief summary of the more important actions taken. After an extended discussion, it was decided not to affiliate the Junior Division with the National Science Fair. Two gifts of \$50 each presented to the Academy by Dr. C. M. Goethe of California were assigned to the work of the Junior Division. It was decided to support the Academy Conference with a donation of \$1 for each one hundred members in our Academy. Dr. J. R. Coash was selected to be recommended to the president of Bowling Green University for appointment as local chairman for the 1957 annual meeting. It was decided that in the future, the annual membership list would be prepared in the fall rather than in the spring in order to compile the membership at a time when it was at its most stable point. The Kettering Foundation presented the Academy with a gift of \$750 to balance the books of the Ohio Journal of Science. The Trustees of the Research Funds announced the award of \$150 for the support of two research projects. After a lengthy discussion on the present situation regarding the teaching of science and mathematics in high schools, President Rothmund was authorized to appoint a temporary committee to study matters pertaining to the training and certification of teachers of science and mathematics.

At the Wittenberg meetings, Dr. E. Lucy Braun reported on the historical development and accomplishment to the present time of the Ohio Flora Committee which has been a continuing temporary committee of the Academy. A request for financial aid submitted to the National Science Foundation in the name of the Academy was rejected because the project was considered too wide in scope for a single grant. Accordingly, it was recommended that a reduced request be made to finance the unit on the Woody Plants of Ohio supervised by Dr. Braun. The Executive Committee took action to revise the request as suggested under the auspices of the Ohio Academy of Science. The Ohio Flora Committee was reappointed with commendation for its excellent work.

The secretary announced that beginning with January 1, 1957, funds allocated to state academies of science by the A.A.A.S. must be used for projects of high school students or, in special cases, for undergraduate students in small colleges. A.A.A.S. funds will no longer be available for research by faculty members and graduate students.

The Executive Committee accepted an invitation to meet for its annual meeting in 1961 at the University of Cincinnati. The committee formerly in charge of revising the constitution, consisting of Drs. Popham, Blaydes, and Tidd, was reconstituted to re-examine the constitution for possible changes and additions.

At the meeting of the Council, a motion was passed to make available for research purposes, a grant from our general fund equal to that given to the Academy for use by high school pupils since this money will no longer be available for research purposes. Such is to be done for one year until other provisions can be made to continue the research funds. Dr. Lovenstein was appointed to study the matter of forming a section in engineering, and Dr. Shaffer was appointed to study enlarging the present section of anthropology and sociology to a section on social sciences. The Academy membership as of April 4, 1956, was 1,196 and distributed among the sections as follows: A-278, B-198, C-181, D-111, E-64, F-39, G-111, H-94, I-27, J-93. The 1957 annual meeting was scheduled for Bowling Green State University at Bowling Green on April 18, 19, 20.

Respectfully submitted,

RALPH W. DEXTER, *Secretary*

REPORT OF THE TREASURER FISCAL YEAR 1955

ACADEMY BUSINESS

	1955	1954
RECEIPTS:		
Bank Balance, January 1.....	\$3,853.96	\$3,380.04
Membership Dues.....	4,175.50	4,314.00
Sale of Publications.....	42.34	6.42
Interest U. S. Bonds.....	47.50	47.50
Exhibitor Fees (Commercial).....	50.00	75.00
Gift, Charles F. Kettering Foundation.....	750.00	
Gift, C. M. Goethe.....		25.00
Refund on cost of U. S. Bonds.....		6.88
Miscellaneous.....		75.10
Junior Academy.....	746.30	
	<hr/> \$9,665.60	<hr/> \$7,929.94
EXPENDITURES:		
Subscriptions and Engraving, Ohio Journal of Science.....	\$3,047.06	\$2,847.93
Printing Annual Report.....	118.18	82.04
Printing announcements and notices.....	326.30	212.50
Postage, office supplies, bank charges, auditing, and other administrative expenses.....	624.67	661.76
Junior Academy.....	734.11	266.75
Academy Conference.....	11.74	5.00
Bank Balance, December 31.....	4,803.54	3,853.96
	<hr/> \$9,665.60	<hr/> \$7,929.94
Excess income over expense.....	\$ 917.08	\$ 473.92

RESEARCH FUND

RECEIPTS:		
Bank Balance, January 1.....	\$ 233.85	\$ 197.33
Interest on Savings Account.....	53.34	18.99
Interest on U. S. Bonds.....	7.50	7.50
Dividends, Banc Ohio Stock.....	41.25	32.50
Grant, A.A.A.S.....	369.50	190.00
	<hr/> \$ 705.44	<hr/> \$ 446.32
EXPENDITURES:		
Grants.....		\$ 190.00
Harold G. Multer.....	35.00	
Ohio Flora Committee.....	212.00	
John R. Coash.....	100.00	
Robert E. Woodruff.....	50.00	
Harold C. Fritts.....	100.00	
Robert W. Long.....	50.00	
Bank Charges.....	2.65	3.48
Interest still in Savings Account.....	34.35	18.99
Bank Balance, December 31.....	121.44	233.85
	<hr/> \$ 705.44	<hr/> \$ 446.32
Excess income over expense, 1954.....		\$ 55.51
Excess expense over income, 1955.....	\$ 97.05	

Respectfully submitted,

ELTON F. PADDOCK, *Treasurer*

REPORT OF THE TRUSTEES OF THE RESEARCH FUND FISCAL YEAR 1955

In the fiscal year of 1955 the trustees awarded research grants to five Academy members and the Ohio Flora Committee, totaling \$547.00. The financial records of the trustees is included in the treasurer's report above.

Respectfully submitted,

G. W. BLAYDES, *Chairman*
R. P. GOLDTHWAIT
H. V. KNORR

REPORT OF THE ACADEMY LIBRARIAN FOR 1955

The Librarian is pleased to inform the Academy that its official journal is used in four hundred and ninety-eight exchanges. Seventy-four percent of these exchanges are with institutions located abroad. Twenty-six percent of the exchanges are with domestic institutions. Since the last annual report seventeen additional exchanges have been concluded. As a result of bringing our mailing list up-to-date, we note that our total number of exchanges is the same as that of the report for 1954.

Sales of the Academy's publications for the period July, 1955 through April, 1956 amounted to seven dollars and fifteen cents (\$7.15). This sum was turned over to the Treasurer of the Academy.

Respectfully submitted,

MORTON COBURN, *Librarian*

REPORT OF THE JOINT ADMINISTRATIVE BOARD OF
THE OHIO JOURNAL OF SCIENCE

The annual meeting of the joint administrative board of The Ohio Journal of Science was held at Columbus on April 14, 1956. The meeting was called to order by board chairman Spieker. Present were Mr. Spieker and Mr. Meyer representing the Ohio State University, Mr. Hoel representing the Ohio Academy of Science, and Mr. Bohning, Mr. Popham and Mr. Fisk of the Ohio Journal of Science staff. Mr. Lindsey was unable to attend. Mr. Spieker was elected chairman of the board for the year 1956-57.

The report of the business manager was approved as read. This report which accompanies these minutes, is mainly in the form of a financial statement for volume 55. Mr. Popham announced the favorable action of the executive committee of the Academy to transfer the \$750 gift of Charles F. Kettering to the Journal. The money is being used to pay the increased cost of printing the Journal, a result of a new contract negotiated with the printers at higher rates. It is anticipated that the Journal will need a similar sum of money to supplement its ordinary income during 1957 if it is to print the same number of pages as in 1956 and if it is to prevent the stock-piling of manuscripts worthy of publication.

The report of the editor, Mr. Bohning, was approved as read. A copy of this report is appended to these minutes. The editor indicated that the Journal is only 5 months behind in the publication of papers. The editor feels that this period is a minimum practicable working time.

Mr. Fisk presented the report of the book review editor which was approved as read. He indicated that there is at present no back log of book reviews and he is therefore in a position to submit reviews of current books for publication. Mr. Fisk called to the board's attention the fact that any Academy member who wishes to review a book may contact him. If the book is suitable for review in the Journal, the book will be requested from the publisher and mailed to the reviewer. It is, of course, customary for the reviewer to retain the book for his library after submitting the review for publication.

Mr. Spieker was instructed to appoint a committee to audit the books of the business manager.

Mr. Bohning, who was first elected editor of the Journal on April 8, 1953, asked to be relieved of his duties as soon as a suitable successor could be found. The board accepted Mr. Bohning's resignation with regret, and expressed its thanks for the unusually competent manner in which Mr. Bohning has handled the duties of editor.

Mr. Popham nominated Mr. Henry Leroy Plaine for election as editor with the proviso that Mr. Bohning should serve as editor until a mutually agreeable time for changing the editorship can be decided upon by Mr. Bohning and Mr. Plaine.

The board elected Mr. Popham business manager and Mr. Fisk book review editor for the year 1956-57. It was suggested by Mr. Fisk, and mutually agreed by other members of the board, that Mr. Plaine should have the opportunity to choose a book review editor at the time of the next board meeting.

The board eliminated the position of associate editor of the Journal.

The secretary was instructed to include in these minutes the results of a mail balloting conducted in October, 1955. At that time the board unanimously approved a proposal to increase the subscription rate of the Ohio Journal of Science from \$4.00 to \$6.00 per volume (U.S.A.) and from \$4.50 to \$6.50 per volume (outside the United States). The new rates were to become effective as soon as practicable. The business manager announced that the higher rates will become effective with subscriptions to volume 57.

All actions of the board were approved unanimously.

Respectfully submitted,

RICHARD A. POPHAM

Secretary of the Board

THE OHIO JOURNAL OF SCIENCE

Volume 55—Fiscal Year 1955

BALANCE SHEET

(With comparison to previous Two Years)

	Volume 53 Fiscal Year Jan. 1, 1953 Dec. 31, 1953	Volume 54 Fiscal Year Jan. 1, 1954 Dec. 31, 1954	Volume 55 Fiscal Year Jan. 1, 1955 Dec. 31, 1955
RECEIPTS:			
Bank balance at beginning of period.....	\$1,566.51	\$1,928.65	\$2,417.68
O. S. U.—paid for subscriptions.....	2,500.00	2,500.00	2,500.00
O. A. S.—paid for subscriptions.....	2,069.50	2,035.50	1,944.00
Non-members—paid for subscriptions.....	432.50	354.50	289.39
Separate numbers, volumes and reprints sold..	657.15	393.85	230.88
50 year index sold.....	555.00	197.50	25.00
O. A. S.—paid ½ cost of plates.....	237.84	312.43	303.06
O. A. S.—paid for annual report.....	136.28	82.04	118.18
Miscellaneous.....	34.94	597.57	999.13
Advertisements.....	387.00	280.68	282.69
Charles F. Kettering—Gift.....	0.00	500.00	750.00
	<u>\$8,576.72</u>	<u>\$9,182.72</u>	<u>\$9,860.01</u>
EXPENDITURES:			
Spahr and Glenn—printing O. J. S.....	\$4,843.80	\$5,119.80	\$5,012.98
Bucher Engraving—plates.....	624.86	606.13	516.93
Postage and express.....	281.50	237.73	224.47
Secretary and labor.....	125.06	91.08	74.25
Office expenses and bank charges.....	61.86	85.73	20.65
Advertising of the O. J. S.....	213.89	0.00	0.00
Reprints.....	236.89	24.00	11.25
Mailing envelopes.....	225.77	0.00	251.46
Refunds.....	0.00	3.00	0.00
Miscellaneous.....	34.44	597.57	1,032.91
Bank balance at end of period.....	<u>1,928.65</u>	<u>2,417.68</u>	<u>2,715.11</u>
	<u>\$8,576.72</u>	<u>\$9,182.72</u>	<u>\$9,860.01</u>
Cost of supplying one volume of six numbers...	\$3.085	\$3.046	\$2.976
Subscription price to Academy Members.....	\$1.50	\$1.50	\$1.50
Approximate number of Academy Members....	1,250	1,200	1,200

THE OHIO JOURNAL OF SCIENCE

REPORT OF THE EDITOR OF VOLUME 55, 1955,

to the Joint Administrative Board

April 14, 1956

Volume 55 of the Ohio Journal of Science contained 408 pages of which 365 pages were devoted to 53 scientific papers in 6 fields of science (as designated by sections of The Ohio Academy of Science) and 43 pages to announcements, book notices, advertising, and index.

Respectfully submitted,

R. H. BOHNING, *Editor*

REPORT OF THE BOOK REVIEW EDITOR

The number of books received for review in 1955 was 87; in 1954 it was 74; and in 1953 it was 64. This increase in books submitted for review has not been reflected in the number of reviews published which has dropped from 53 in 1953, to 51 in 1954, and 46 in 1955.

It may also be pointed out that the number of books reviewed in the same year in which they are published is fortunately on the increase. The actual numbers are: 1 in 1953, 7 in 1954 and 13 in 1955.

In 1955, 43 books were given to the Ohio State University library.

Respectfully submitted,

FRANK W. FISK, *Book Review Editor*

REPORT OF THE JUNIOR DIVISION OF THE OHIO ACADEMY OF SCIENCE

This report closed the eighth year of activities of the Science Day program on the State level. A total of 2673 High School students participated in the seven District Science Days, and of these approximately 425 registered for the State Science Day at Wittenberg College on April 20, 1956.

Two copies of the Newsletter have been published so far this year with a third issue to be published directly following the Wittenberg meeting. This Newsletter has been sent to all Science Teachers throughout the state, as well as to members of the Senior Academy.

The Kroger Co. has very graciously presented an award and stipend to seven high schools during the year for outstanding participation of their students in science and in our program.

This year, for the first time, the Owens-Illinois Glass Co. has presented suitably marked glasses to each entrant at the State Science Day. It is hoped that still other industrial concerns can be interested in this type of program.

For the most part, the Senior Academy members have co-operated very nicely in providing judges for the various Science Days. The various sectional chairmen and vice-chairmen are to be commended for the fine help they have given.

Respectfully submitted,

ROBERT E. MCKAY
Executive Secretary
Junior Division

REPORT ON THE OHIO BIOLOGICAL SURVEY

The Ohio Biological Survey, affiliated with the Ohio Academy of Science, held an administrative board meeting on April 19, 1956. Acting Director D. M. DeLong introduced Dr. Charles A. Dambach, newly appointed Director of the Institute of Natural Resources, who outlined the possible relationships of the Ohio Biological Survey with the Institute of Natural Resources. A committee consisting of W. F. Hahnert, chairman, W. C. Beaver, H. R. Eggleston, and G. T. Jones was appointed to study the matter and to submit a report to all members of the administrative board at some future time for action.

THE OHIO FLORA COMMITTEE

The past year has been one of continued progress on the monumental task of preparing an "Ohio Flora". The endless hours of field, herbarium, and desk work which have been spent during the past year cannot easily be reported here. Among the more obvious evidences of progress are the following.

1. A preliminary list of Ohio Pteridophytes, by Wm. Adams, was distributed in June 1955.

2. A preliminary list of Ohio Legumes, by Wm. Gambill, was distributed in July 1955.

3. The manuscript, by E. J. Palmer, on the *Crataegus* of Ohio is now in the hands of the committee.

4. A manuscript by E. Lucy Braun on the Woody Plants of Ohio is well along.

5. Several thousand specimens have been added to Ohio herbaria during the past year. These represent many new county records.

6. An application for financial aid is now pending with the National Science Foundation.

Respectfully submitted,

J. ARTHUR HERRICK, *Secretary*

REPORT OF THE COMMITTEE ON THE TRAINING AND CERTIFICATION OF SCIENCE TEACHERS

This committee has been formed in response to the request of the council dated December 3, 1955. There was a brief meeting of the committee on April 19, 1956, at Wittenberg College. The following members were present: Eugene Van Cleef, J. F. Corwin, John C. Fullerton, Eleanor Longbrake, J. W. McGrath, Lincoln Petit, Walter P. Porter, and Harry A. Cunningham. Dr. John R. Mayor, director of the Science Teaching Improvement Program of the American Association of the Advancement of Science, met with the committee.

Some progress was made in defining the problems before the committee. It was decided that the committee would try to have at least four meetings during the coming year, looking toward the formulation of a report to be presented to the annual meeting of the council of the Ohio Academy of Science in 1957.

Respectively submitted,

HARRY A. CUNNINGHAM, *Chairman*

REPORT OF THE RESOLUTIONS COMMITTEE

Be it resolved that the members of the Ohio Academy of Science express to the administration of Wittenberg College, and to chairman Dr. W. C. Beaver of the local committee on arrangements, and to the several members of that committee, their appreciation for the excellent facilities and very thoughtful hospitality, which have contributed greatly to the success of this 65th annual meeting of the Academy.

Respectfully submitted,

WALTER C. KRAATZ
W. H. SHIDELER

REPORT OF THE NECROLOGY COMMITTEE for the Period of April, 1955 to April, 1956

During this interval ten members of the Academy have died. The necrology report for 1954 contained a record of five deaths and the 1955 report recorded seven and now for 1956 the record rises to ten. Study of the age brackets of these deceased members shows there were three octogenarians, two in the seventy year age group, three in the sixties, and two in

the thirty year age group. This distribution shows a slight tendency towards increase in the younger age groups. Many of the Academy members have reached their sixtieth year, so it is to be expected that the majority of deaths would occur in the upper age brackets, but of the ten deaths two were only in the thirty year group. Of these one was due to cancer and one to heart disease. This points up the frequently noted trend for these two major causes of death in the American scene, that they attack younger persons. It would be interesting to know whether the one fatality due to cardiac failure aged thirty-four was due to childhood rheumatic fever and whether the one death due to carcinoma of the lungs, aged thirty, had a history of excessive smoking. The death of the older members due to arteriosclerosis and cardio-vascular diseases is normal for that age group in the process of aging.

Respectfully submitted,

H. H. M. BOWMAN, *Chairman*, Toledo University
PAUL ROTHMUND, Ohio State University
JOSEPH T. MADDOX, Euclid, Ohio

LAWRENCE RUSSELL BRUNSTETTER

Geologist and employee of the Division of Water, Department of Natural Resources of the State of Ohio. Member of the Conservation Section of the Academy.

Mr. Brunstetter was born at Orangeville, Pennsylvania, on July 3, 1921, and secured his collegiate education at Ohio State University from which he received the Bachelor of Science degree with the major in geology. For a period after attaining his degree he was employed in the geological department of the Stanolind Oil Company at Houston, Texas. Mr. Brunstetter was unmarried and lived with his parents in Columbus, Ohio, at the time of his death which occurred on July 11, 1955, of cardiac failure, possibly due to early rheumatic fever in childhood. His untimely death at the age of thirty-four cut short a career in conservation which had all the prospects of success. He was buried in Greenlawn Cemetery at Columbus, Ohio.

DR. CLARENCE LORENZO DOW

Geographer. Professor and Head of the Department of Geography at Ohio University for many years. Fellow of the Geography Section of the Academy.

Dr. Dow was born on July 26, 1895, at Cattaraugus, New York, and attended college in 1915 and 1916 at Kansas State Teachers College. Later he completed his work for the A.B. degree at the University of Nebraska and received it in 1927. He held several high school positions in Ottawa and Cloud Counties in Kansas and at Fremont and Lincoln, Nebraska. For five years he was instructor in geology and geography at Nebraska Wesleyan College. In 1930 he received the M.A. degree from the University of Nebraska and in 1933 the Ph.D. degree. The next three years he taught geography at Clarion State Teachers College in Pennsylvania and in 1936 joined the faculty of Ohio University at Athens, Ohio, as associate professor of geology and geography. In 1941 he was promoted to the rank of professor and made chairman of his Department in 1949.

In 1919 Dr. Dow had married Cita Mae Thompson and after her death in 1936 he married Caroline Walters on August 14, 1940. By the first marriage he had a daughter, Jean Dow (Mrs. Richard Dolan) and by the second marriage a son, James Lorenzo Dow.

In addition to his regular duties at Ohio University, Dr. Dow was active in Conservation and Aviation affairs of the State and Federal Government. He taught Meteorology at the Civil Aeronautics Ground School during the World War II and was himself a pilot, an officer in the Civil Air patrol. He was instrumental in 1948 in securing the Athens State Forest as a conservation project in Ohio and helped draft the legislation creating the Ohio Department of Natural Resources. He was a director of the Ohio Conservation Laboratory, also. He was the author of many articles in geographical and geological journals. In August, 1954, Dr. Dow was awarded a U. S. Educational Grant for lectures and research, and went abroad as a Fulbright Lecturer on Geography in Japan. After completing a year of visiting and lecturing in forty-two of the forty-six prefectures of Japan, he was returning to the United States when he was stricken with a coronary occlusion and died on shipboard 150 miles off the Pacific Coast on July 28, 1955. His body was brought to Athens and interred in Alexander Cemetery. Dr. Dow was a member of the Association of American Geographers, the National Council of Geography Teachers, the Ohio State Geological Survey and since 1949 a member of the Ohio Natural Resources Commission. He was elected a Fellow of the Ohio Academy of Science in 1950 and at the age of sixty, Dr. Dow's life expectancy should have seen fruition in several more years of valuable work in geography and conservation.

DAN LEE KIRLIN, M.Sc.

Instructor in Zoology, Ohio State University. Member of the Ohio Academy of Science from 1950 to 1956.

Mr. Dan Lee Kirlin was born August 31, 1926, at Wolcottville, Indiana, and after completing his elementary education entered Ohio State University and was graduated in March, 1950, with the Bachelor of Arts degree, taking his major in Zoology. In June, 1952, he was

awarded the Master of Science degree. He was interested in the genetics of the mink. On June 23, 1944, he married Miss Prisilla Gregg and to this union were born two children, David L. Kirlin and John A. Kirlin. Mr. Kirlin was elected to membership in the Zoology Section of the Ohio Academy of Science and was active in his pursuit of studies in his field of Zoology and the Seminar of which he was a member. On April 18, 1956, after a brief illness, he succumbed to pulmonary carcinoma and was buried in Woodlawn Cemetery, Lima, Ohio.

DR. ZENO PAYNE METCALF

Entomologist, Professor of Zoology and Entomology at State College of North Carolina and Dean of its Graduate School. Fellow of the Section of Zoology of the Academy.

Dr. Metcalf was born at Lakeville, Ohio, on May 1, 1885, and received his Bachelor of Arts degree from Ohio State University in 1907 and the Doctor of Science degree from Harvard University in 1925. On October 20, 1909, he married Miss Mary Louella Correll and to this union was born one child, Katherine (Mrs. Micou F. Browne). In 1907 and 1908 he was an instructor in Michigan State University and from 1908 to 1912 taught as instructor at North Carolina State University. In 1916 to 1918 he was instructor in biology at Ohio State University. In 1920 he taught in the summer sessions of Michigan University and in 1925 and 1936 at Duke University. He continued his work as Associate Professor at North Carolina State to 1912. In that year he became Director of the State Experiment Station and from 1940 to 1943 served as Director of Graduate Study and from 1943 to 1950 was Dean of the Graduate School. From 1950 to 1956 he was Professor of Zoology and Entomology. In 1955 he was presented with the Oliver Max Gardner Award as the faculty member of North Carolina University who has made the greatest contribution to the human race. Dr. Metcalf was the author of nine books and a member of thirty-six learned societies. He was a key speaker at the International Congress of Zoologists in Paris in 1948 and the Congress of Entomologists that met in Stockholm the same year. He was elected president of three major biological societies—The American Entomological Society, the American Ecological Society and the American Microscopical Society. He also served on the editorial boards of four national professional journals and has published ninety-six professional articles. He is recognized as the world authority on the Homoptera and for forty years worked on this class of insects. At the time of his death, he was working on the 42 volume series of the Homoptera of the world. Fifteen volumes are already in press and several volumes are ready for the press. The editors will attempt to publish the rest of this life work. Up to noon of the last day of his life, he was in his office working on the great catalog of the 30,000 described species of Homoptera which now contain 512,000 references. While sitting talking with his wife and daughter, he suddenly and unexpectedly died of a coronary attack on January 5, 1956 and was buried in Oakwood Cemetery, Raleigh, North Carolina.

In addition to his monumental work on the Homoptera Dr. Metcalf wrote a number of reference and textbooks, viz. *Insect Pests in Rural Life*, *Key to Insects*, *The Family Fulgoridae*, *General Zoology*, *Economic Zoology*, *Introduction to Zoology*, and many special monographs on genera of insects. Dr. Metcalf was a member of the Presbyterian Church and of the Society of Sigma Xi, Alpha Gamma Rho, Alpha Zeta, and Phi Kappa Phi.

DR. CHARLES BRADFIELD MORREY

Bacteriologist Professor and Chairman of the Department of Bacteriology at Ohio State University from 1903 to 1935. Charter member of the Academy and Fellow of the Medical Section.

Professor Morrey was born on November 5, 1869, at Chester Hill, Morgan County, Ohio, and received his Bachelor of Arts degree from Ohio State University in 1890, and the M.D. degree from Starling Medical College in 1896 at Columbus. He did graduate study at the Pasteur Institute in Paris and at the University of Vienna in 1898 and 1899. In the years 1890-1891 he served as instructor in Latin, Greek, and Physiology at Ohio State University and from 1896 to 1897 was the Lecturer in Physiology and Histology at Starling Medical College. In 1899 he became Assistant Professor of Anatomy, Physiology, and Bacteriology at Ohio State University, and in 1903 he established the Department of Bacteriology in the State University as Chairman of the department and which position he retained until he became emeritus in 1935.

On October 24, 1898, he married Miss Grace Hamilton Jones and to this union there accrued three children, viz. Professor Charles B. Morrey Jr.; Marion (Mrs. Otto C. Richter); Jessie (Mrs. Michael V. Condoide).

Professor Morrey received many honors and was the author of several texts in his field, *Fundamentals of Bacteriology*, 1929, and *Laboratory Exercises in Bacteriology*, and numerous papers, as "Vaccination in Colds".

He was a charter member of the Ohio Academy of Science, and a Fellow, Member of the American Bacteriological Society, the American Chemical Society, the Sigma Xi (President, O.S.U. chapter, 1919), A.A.A.S., the Faculty Club of the University, the Canadian Club and the University Club.

On April 24, 1955, Dr. Morrey passed away at his home, death being due to complications

of arteriosclerosis, hypertension, and cardiac failure. He was buried at Union Cemetery, Columbus, Ohio, rich in accomplishment and honor.

DR. RAYMOND C. OSBORN

Zoologist and Entomologist. Professor of Zoology and Entomology at Ohio State and Department Chairman from 1917 to 1942. Fellow of the Zoology Section of the Academy.

Dr. Osborn was born at Newark, Ohio, on January 4, 1872, and after securing his elementary education in Ohio public schools entered Ohio State University and received the Bachelor of Science degree in 1898. In 1900 he received the M.Sc. degree and in 1949 was awarded an Honorary Doctor of Science from Ohio State University. In 1906 he received the Ph.D. after several years graduate work at Columbia University as a teaching Fellow. For the next four years he held a position as instructor and later Assistant Professor at Barnard College, New York City, and Professor of Biology at Connecticut College for Women. In 1910 he became the Associate Director of the New York City Aquarium where he served until 1915 when he became an instructor in Starling Medical College, Columbus, Ohio, after a short period as Professor of Biology at Fargo College. In 1917 he was made head of the Department of Zoology and Entomology at Ohio State University, where he remained until he became emeritus in 1942.

On August 19, 1903, Dr. Osborn married Miss Mary Hubbell who survives him in Columbus.

From 1945 to 1952 he was a Research Associate of the Allan Hancock Foundation at the University of Southern California. In 1950 he was awarded the Elliot Gold Medal by the National Academy of Science for his contributions in the field of zoology. Dr. Osborn was an honorary member of the American Museum of Natural History, a life member of the Outdoor Writers Association, a Fellow of the AAAS and the Ohio Academy of Science, a member of the Sigma Xi Society, American Society of Naturalists, American Society of Zoologists, American Fisheries Society, American Society of Economic Entomologists, Ecological Society of America, the American Society of Parasitologists, American Microscopical Society, American Society of Limnology and Oceanography, of which he was vice-president in 1938 and president in 1941, and the New York Academy of Science.

On August 6, 1955, Dr. Osborn passed away at his home in Columbus of arteriosclerosis and was buried in Cedar Hill Cemetery, Newark, Ohio. He was active in many local organizations in Columbus and after a long and busy life adorned with lasting friendship of thousands of students and colleagues he left a wide gap in the scientific circles of Ohio.

DR. RODERICK PEATTIE

Geographer. Professor of Geography at Ohio State University and Fellow of the Geography Section of the Academy.

Professor Peattie was born in Omaha, Nebraska, on August 1, 1891. He received his Bachelor of Science degree from the University of Chicago in 1914 and the Ph.D. degree from Harvard University in 1920. On June 11, 1917, he married Margaret Rhodes by whom he had three children, Roderick E., Anne, and Michael R. Peattie. After her decease in 1945 Dr. Peattie married Miss Ruth Cavett in October, 1947.

He was a specialist in physiography and from 1916 to 1919 served as an assistant in that work at Chicago University during the summer. In 1915 he was an assistant at Radcliffe College in the same work. From 1916 through 1917 he was an Austin Teaching Fellow at Harvard and also made some topographic surveys for the U. S. Geological Survey. During 1919 and 1920 he was employed as field geologist for the Cosden Oil and Gas Company, and at the same time served as Assistant Professor of Geology at Williams College. In 1920 he joined the faculty of Ohio State University as Associate Professor of Geography and in 1925 was raised to the rank of Professor in which office he remained until his demise. During 1944 and 1945 Dr. Peattie was on leave of absence serving as Chief of the War Information Office for the Union of South Africa. In several summers between 1921 and 1938 he was summer lecturer in geography at the University of California, Clark University, Northwestern University and the University of Wisconsin. In 1918 he had been an instructor in the Army Engineers School of the A.E.F.

Dr. Peattie was a member of the Association of American Geographers, Fellow of the Ohio Academy of Science, Sigma Xi and Alpha Delta Phi. He was the author of *The Geography of Ohio* in 1924 and two textbooks, *College Geography* and *Mountain Geography*, special monographs such as *Exploring Geography*, *Geography in Human Destiny*, *The Incurable Romantic*, *How to Read Military Maps*, *Look to the Frontiers*, *Struggle on the Veld*, and for a number of years was Editor of the American Mountain Series. In August, 1955, Dr. Peattie suddenly died of cardiac failure, and his remains were cremated and the ashes returned to this earth which had most of his life impelled him to its study.

DR. JOHN ERNEST POTZGER

Botanist, Chairman of the Department of Botany of Butler University, 1952 to his death in 1955. Member of the Plant Science Section of the Academy.

Professor Potzger was born in Presque Isle County, Michigan, on July 31, 1886, but most of his life was spent in Indiana. He received his Bachelor of Arts degree and the Master of Arts degree from Butler University in Indianapolis, and the Ph.D. degree from Indiana University in 1932. He was invited to his alma mater at Butler to become Professor of Botany in 1931 and was made head of the Department in 1952. From 1947 to 1951 Dr. Potzger was a Lecturer at Purdue University's Summer Conservation Camp. From 1952 to 1955 he was

the guest Research Director of the Service de Biogéographie of the Université Montreal at its Biological Station at Lac Monroe in the Province of Quebec.

On June 9, 1947, he married Dr. Margaret Esther Whitney. Dr. Potzger was a member of Phi Kappa Phi, Sigma Xi, elected to the Indiana Academy of Science in 1926, he became a Fellow in 1932. He was also a member of the Wisconsin Academy and the A.A.A.S. As an active member of the Central Association of Science and Mathematics Teachers, he was editor of its Journal and Yearbook from 1940 to 1945. He was elected vice-president of the Association in 1947 and president in 1948. He was also closely identified with the Ecological Society of America and served as its president in 1954-1955. In 1949 he was granted the J. I. Holcomb award for having made the greatest contribution to education in Butler University. On September 18, 1955, Dr. Potzger died of coronary occlusion and his remains laid in Concordia Cemetery in Indianapolis.

DR. WALDO EDUARD STEIDTMANN

Botanist and Chairman of the Department of Biology at Bowling Green State University, and Fellow of the Plant Science Section of the Academy.

Professor Steidtmann was born on April 27, 1896, at Prairie du Lac, Wisconsin. He received his A.B. degree from the University of Wisconsin in 1923 and the M.A. degree from the University of Michigan in 1929, and attained the Ph.D. from the same University in 1935. From 1923 to 1932 he served as instructor at Marquette University in Milwaukee. From 1932 to 1935 he was an instructor at the University of Michigan and in 1936 was appointed Assistant Professor of Biology at Bowling Green University. In 1940 he was raised to the rank of Associate and in 1947 advanced to the rank of Professor of Biology and made Chairman of the Department and so remained until his death.

On September 8, 1930, Dr. Steidtmann married Miss Evelyn Dressel and to this union were born two children, Sally Ann Steidtmann and James Richard Steidtmann.

Professor Steidtmann was elected Professor of the Year at Honors Day in May, 1955, by Omicron Delta Kappa, national Leadership Fraternity. He was also a member of Phi Sigma, Beta Beta Beta, Sigma Xi, Omicron Delta Kappa, the Botanical Society of America, A.A.A.S., Michigan Academy of Science, Alpha Tau Omega fraternity, and many other civic and social organizations, as well as the Presbyterian Church which he served as an elder, trustee and chorister. On June 21, Dr. Steidtmann suddenly died of coronary occlusion and was buried in Oak Grove Cemetery, Bowling Green, Ohio.

DR. FREDERICK CLAYTON WAITE

Professor of Histology and Embryology at the College of Medicine, Western Reserve University, from 1904-1940. Member and Fellow of the Medical Science Section.

Professor Waite was born at Hudson, Ohio, on May 24, 1870. His secondary education was secured in Western Reserve Academy at Hudson from which he was graduated in 1888. He then entered Western Reserve University at Cleveland and was graduated with the Bachelor of Letters in 1892. He received the Master of Arts degree in 1893 and the Ph.D. from Harvard University in 1896. In 1943 he was awarded the Honorary Degree of Doctor of Humanities by Western Reserve.

On December 24, 1916, Dr. Waite married Mrs. Emily Bacon Fisher of Cleveland. In 1892 he had been appointed Assistant Professor of Biology at Western Reserve and remained until 1895 when he received the Morgan Fellowship at Harvard in 1896 and remained until 1898 a student in zoology. In 1897 he was an instructor in a high school in New York City, and from 1898 to 1900 was a professor in New York University. In 1900 to 1904 he was an assistant Professor of Anatomy at Rush Medical College in Chicago. In 1904 he went to his alma mater, Western Reserve, as Assistant Professor of Histology and Embryology and served as Associate Professor from 1904 to 1906 when he became Professor and continued until 1940 when he became emeritus. From 1907 to 1917 Dr. Waite was Secretary of the Faculty of Medicine. During 1917 and 1918 he served his country as a Captain in the Sanitary Corps of the U. S. Army and returned as a Major in the Reserve Corps in 1919.

He was a Fellow of the A.A.A.S. and of the Ohio Academy of Science, of which he was President in 1930.

He was a member of the American Society of Anatomists, American Society of Naturalists, the American Zoological Society, and the American Society of Microscopists, the Cleveland Academy of Medicine, and an honorary member of the Cleveland Dental Association, the Vermont Historical Society, the New England Society of the Western Reserve (President in 1932), the American Association of the History of Medicine, the Sons of the American Revolution, and Sons of Colonial Wars, Sigma Xi, Phi Beta Kappa, Alpha Omega Alpha. He also served as Vice President of the Association of American Medical Colleges from 1905 to 1906, and was a Fellow of the American Medical Association and a member of the University Club and the Rowfant Club of Cleveland. He was the author of the *History of the Western Reserve School of Dentistry* and a *History of Western Reserve University*, and a book entitled *The Hudson Era* about his native community. He also wrote the *Story of Western Reserve Medical College* and the *History of the New England Female Medical College*.

His busy and fruitful life closed on March 30, 1956, due to cardiovascular conditions induced by his advanced age of 86. He was buried in Pine Hill Cemetery, Dover, New Hampshire, where he had lived with his wife since 1940 when he retired as emeritus professor.